UNM PED ACUTE HEADACHE PATHWAY

DEFINED POPULATION

Inclusion

- Children ages of 5-18 years (inclusive), with either **new** headache or **worsening** headache
- History suggestive of primary headache disorder
- Normal neurologic exam (specifically normal funduscopy and GCS, no focal findings)
- No medication contraindications
- No consideration of other systemic workup

Exclusion

- Acute vision loss, altered mental status, "thunderclap headache", neck pain that radiates, pain worsening when flat, sleep disturbances
- Abnormal neurologic exam

PRIOR TO INITIATING "ED ACUTE TREATMENT"

1. Inquire about medications received prior to ED visit
   - Ibuprofen (Advil, Motrin) 10 mg/kg/dose (max 600-800 mg dose)
   - Naproxen (Aleve) 10 mg/kg/dose (max 550 mg/dose)
   - Acetaminophen (Tylenol) 325 mg
2. If patient has history of non-response to usual treatment pathway, consider giving the patient what he/she has best responded to
3. Opiates are NOT RECOMMENDED for headache
   - May consider if sickle cell, chronic pain from cancer, etc

* If fever, rashes, or other signs of systemic illness, consider workup for systemic illness and headache as a symptom of said systemic illness.
  - Consider head imaging (CT or MRI) for depressed LOC, abnormal funduscopy, abnormal eye movements, or otherwise focal neurologic exam.

ED Acute Treatment

1st line	• IV hydration: 20 ml/kg NS bolus
	• Anti-emetics:
	  ○ Diphenhydramine- 0.5 mg/kg PO, max 50 mg/dose (IV only if PO intolerant)
	  ○ Prochlorperazine 0.15 mg/kg IV, max 10 mg (or may dose at 5, 7.5, or 10mg])
	• NSAID:
	  ○ Ketorolac 0.5 mg/kg IV, max 30 mg/dose (at an appropriate interval from last NSAID dose)
	NOTE: *Refrain from administering Triptan as to allow for dihydroergotamine (DHE) therapy if hospitalized*

2nd line	• Valproic acid 20 mg/kg IV, max 1000mg/dose *Acceptable if headache has not significantly decreased in 45-60 minutes post administration of first line medications and up to 2 hours post administration to observe for clinical improvement*
3rd line	• If headache has not resolved 2 hours post 2nd line treatment, may admit for dihydroergotamine (DHE) • If in PM, mag give Methylprednisolone 5 mg/kg mg IV, max 250 mg/dose • May repeat Diphenhydramine, Prochlorperazine, and Ketorolac q 6 hours and Valproic Acid q 12 hours until evaluated by neurology in am (or until resolution)

Discharge Instructions

Preventative Treatment (Lifestyle modifications)

1. Fluid consumption
   - 80-100 oz/day (1 oz/day/lb, up to 100 oz/day)
2. Avoid caffeine
4. Diet
   - regular and healthy meals and snacks, including breakfast
5. Aerobic exercise
   - ≥30 minutes 3-5 times per week
6. Stress reduction
7. Avoid known triggers

8. Sleep Hygiene

- Children should sleep enough that they can easily wake up and not be sleepy/take naps during the day
- Sleep on the same schedule every night
- Avoid >1 hour difference in sleep time between weekday and weekends
- The AAP suggests that all screens be turned off 30 minutes before bedtime and that TV, computers and other screens not be allowed in bedrooms. Establishing a bedtime routine is important to ensuring children get adequate sleep each night.

Acute Treatment (at Home)

1. Administer immediately upon initial onset of symptoms
2. Limit medication to a maximum of three times per week, as to reduce the risk of medication overuse headache
   - Ibuprofen (Advil, Motrin) 10 mg/kg/dose (max 600-800 mg dose)
     OR
   - Naproxen (Aleve) 10 mg/kg/dose (max 550 mg/dose)
     OR
   - Acetaminophen (Tylenol) 6 mo - <12 yo, 10-15 mg/kg/dose, PO q 4-6 hours (max 75 mg/kg/day up to 1 g/4h and 4 g/day), ≥ 12 yo, 325-650 mg PO q4-6h prn; (max: 1 g/4h and 4 g/day)

Resources

1. American Academy of Pediatrics Supports Childhood Sleep Guidelines
2. Recommended Amount of Sleep for Pediatric Populations:
A Consensus Statement of the American Academy of Sleep Medicine.
Paruthi S., Brooks L.J, et. al; *Journal of Clinical Sleep Medicine, Vol. 12, No. 6, 2016*

WHEN TO PLACE AD HOC

1. Physician has attempted to address headache and not succeeded (or a nonacute concern is present necessitating a neurologic evaluation)
   AND
2. The patient has not been seen by our neurology group previously.
   - *If already followed by neurology service, family should call for a follow-up*